Atari Computer Enthusiasts [N.S.W.]
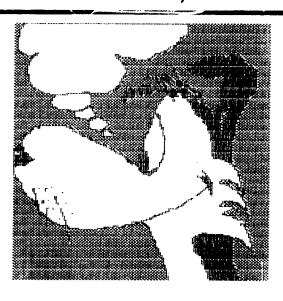
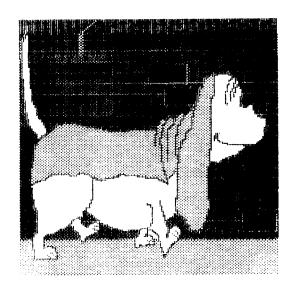INSIDE INFO   No. 17   February 1985

GENIUS AT WORK

FORE!

PRICE $3.00

Atari Computer Enthusiasts (N.S.W.) is an independent, non-profit computer users' group loosely affiliated with Atari Computer Enthusiasts in the U.S.A. While we are recognised as the Official Atari User's Group in N.S.W., we have no connections with ATARI, Inc. Our aims include promotion of the various ATARI Home Computer Systems, instructing both beginners and advanced users in programming techniques, providing public domain software, exchanging hints, tips and ideas amongst members and generally enjoying ourselves.

COMMITTEE MEMBERS	Home Phone No.
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PAYMENTS AND CORRESPONDENCE

All payments can be made at any meeting or by mail. ALL Cheques and Money Orders should be made payable to Atari Computer Enthusiasts (N.S.W.). All Club mail should be addressed to:-

A.C.E. (N.S.W.), GPO Box 4514, SYDNEY N.S.W. 2001.

MEMBERSHIP FEES/RENEWALS

$30 for the first membership and $15 (Renewal Fee) thereafter (or $20 and $10 respectively for students under 18 and still at school). Overseas air-mail subscriptions are $10 (Aust) extra per year.

All memberships begin on 1st July and expire 30th June regardless of when you join. You will receive all issues of Inside Info for that period.

If the number in the top right hand corner of your mailing label is 17, your subscription has expired. Send $20 (Student $13.33) to renew until 30th June 1986.

SPECIAL INTEREST GROUPS

Ring these contacts or write to the group with your suggestions, high scores, reviews, hints or tips.

GROUP	CONTACT	HOME PHONE NO.
ACTION!	Ken Scalley	(02)624 4561
ADVENTURES	Garry Francis	(02)789 1397
ARCADE GAMES	Ken Shiu	(02)534 2120
FORTH	John Mattes	(02) 94 5463
HARDWARE	Jamie Athas	(02)349 7365

REFERENCE LIBRARY

Some books are brought to meetings, others are available only by arrangement with the librarian. Loans are made only to people researching articles or talks for the Club.

ARTICLE/PROGRAM SUBMISSIONS

Articles for Inside Info should reach the editor as early as possible and at least ONE MONTH ahead of the release date. All programs or articles submitted on disk should be in single density, DOS 2 format. For every program you write and have printed in Inside Info, you will be entitled to one Software Exchange disk at half price.

INSIDE INFO

This is our bi-monthly user's group magazine.
BACK ISSUES: $2.50 each for issues in stock. $4 each if issue out of stock. Mailing costs are extra.
EXCHANGE SUBSCRIPTIONS: We are keen to exchange magazines with other Atari Users' Groups.
COPYRIGHT: Unless noted as being copyrighted, permission is given to reprint articles from INSIDE INFO, making acknowledgement to the source. Please send an extra copy of your magazine to A.C.E. (N.S.W.)
ADVERTISING: Full page $50, Half page $30, Quarter page $20. Members' personal ads are free.

SOFTWARE EXCHANGE

A Full list of available titles has been printed in Inside Info #16 (December 1984), however,see the article in this issue.
DISKS: $10 each. CASSETTES: $8 each.
Non-members add 10%. Include an extra $1.50 to cover surface postage within Australia.
Overseas members should write for costs first. We are keen to exchange software with other users' groups.
BLANK MEDIA: Prices are for lots of 10 and may change without notice. An extra $1.50 should be included to cover postage within Australia. Contact Software Exchange for details.
DISKS: $27 (DDSS Nashua -in plastic box) CASSETTES: $9

BULLETIN BOARD - Phone (02)568 2990

Systems Operator (SYSOP) is Jeff Maddock. The system is available between 9 P.M. and 12 P.M. Monday to Saturday only. Access requires a personal password which is available from SYSOP for $3 per year. We recommend you use "AMODEM" terminal software or one of its derivatives.
PUBLIC DOMAIN SOFTWARE ONLY!
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You may be asked to present your membership card before being given any discounts!!
COMPUTERWAVE [5% -cash only]:-
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COVER CARE [25% off computer dust covers]
P.O. Box 719, Chatswood, N.S.W. 2067.   Ph.(02)498 5631

MEETING DETAILS

Meetings are held at 6.15 P.M. on the first Monday of the month or the second Monday if it clashes with a public holiday in the Amenities Room, 23rd Floor, MLC Building, Martin Place, Sydney.
NOTE: You can't enter the building after 6.30 P.M. and you must sign in!

MEETING DATES FOR 1985

#4th February	4th March	#1st April
6th May	#3rd June	1st July
#12th August	2nd September	#14th October
4th November	#2nd December	

# indicates release dates for INSIDE INFO.

EDITORIAL

Since taking over as editor, two problems which seem to plague every editor of INSIDE INFO have become very apparent. Apathy must run high indeed. With over 250 members, I fail to see why these two problems exist.

1.FEEDBACK: At present, feedback to the Editor (or any other committee person for that matter) is almost non-existant. As mentioned in the last issue, feedback is necessary to keep INSIDE INFO interesting to members. What would/wouldn't you like to see? All you need is to put pen to paper. In the next issue, there should be a survey to make it easier. Any suggestions, ideas or criticisms are welcome.

2.ARTICLES: Inside Info needs articles!! This was also mentioned last issue. Only FOUR people responded to the editor's plea. That's appalling! There is no great skill or difficulty involved in writing an article for INSIDE INFO as mentioned in the last issue (if anyone bothered to read it). Even beginners know that any output requires INPUT. If you don't feel competent enough to write a program, send in your idea and it will be printed for those who need ideas for programs.

Here are articles I would like to see submitted:-

1.Home Finance programs (for our June issue).
2.Home Application programs (e.g. recipe file, Personal Memo, etc.)
3.Graphics Screen Pictures by owners of touch tablets, Micropainter, etc. for front covers of INSIDE INFO.
4.Music/Sound Effects programs.
5.Programs written by younger children. (Include age).

I have already written a spreadsheet program which will appear in our June issue, so it shouln't be too hard to put together your contribution whether it be a small or large program, review or article. Put YOUR name in the pages of INSIDE INFO. Remember if you want to see INSIDE INFO removed from the endangered species list, please submit articles.

Looking back at last year, I'd like to gratefully thank Chris Fitzgerald, for all his hard work, effort and persistence as 'temporary editor'. Chris has certainly set a high standard for INSIDE INFO. Many thanks must also go to my predecessors, Garry Francis and Chris Fitzgerald (yet again) for their invaluable help, advice and assistance during the creation of this issue. Those that have already flicked through this issue will notice a part-return to the single column format. To compensate I have kept print in condensed font.

The screen dumps on the cover were created by Ian Champ. Ian would like to see other members swap screens through the Software Exchange. Any takers?

Ken Shiu

NOTICES

MAKING PAYMENTS TO A.C.E.
In recent months several members have sent cheques and money orders to the Club in the names of individuals serving on the committee. No mail or payments should be sent to anyone in the Club for Club business. ALL cheques or money orders should be made payable to "Atari Computer Enthusiasts (N.S.W.)"

VOTING FOR THE BEST ARTICLE IN INSIDE INFO.
It has been decided that in future, voting for the best article in Inside Info will take place after every third issue with the prize-money being $50. This means that authors have a better chance of winning a prize and thus getting some reward for their efforts. Voting for the best article (NOT author) for issues 13, 14 and 15 will take place at the March 1985 meeting. So look over the issues so you can cast your vote.

Voting for the articles in issues 16, 17 and 18 will follow in May 1985 -so start to writin your articles!

AN IDEA
Do you have a copy of the book "Atari BASIC" by Bob Albrecht, LeRoy Finkel and Jerald R. Brown? If you do, and you no longer use it, how about offering it for sale to new members who didn't receive it with their XL computers? Put an ad (stating the price including mailing) in the "FOR SALE" column and everyone will profit by it. You might like to get rid of other books too!

REPORT ON THE SOFTWARE EXCHANGE

by Garry Francis

When I first started ACE(NSW) way back in January, 1982, I had grandiose plans for a regular magazine, a Software Exchange and a Bulletin Board Service. These have all come to fruition, but the Software Exchange has fallen far short of its potential.

I knew I could build the Software Exchange into a rich and diverse source of public domain software which would rival the best that the U.S. users' groups have to offer. So, with this in mind, I nominated myself for the Software Exchange committee position at the A.G.M. last November. For those of you who missed the A.G.M., this was a hotly contested position and I was lucky to win by only one vote! The other nominees have since taken up other committee positions or will be otherwise involved in the group. Philip Haynes will become my offsider in the Software Exchange once I get things organised.

I'm writing this in December and I don't officially take over until 1st January, 1985, but I've already been lumbered with all the junk from the old Software Exchange. My first impressions were "Oh hell, what a mess!", but after delving a little deeper, I realised that "mess" was a rather mild description. DISASTER would be more appropriate! If I listed all the things wrong with the software and its organisation, I could easily fill two or three pages.

Let's back track a couple of months to see part of the reason why this has come about. It appears that Brian Simmons had a last minute rush to get out as many disks as possible before his term ended. This was probably to save face after a rather poor performance during the year. The list of new releases was to be printed in IN SIDE INFO No.16. I got wind of this before the list was printed and, suspecting the worst, told Chris Fitzgerald on two separate occasions to postpone the list until the election of the new Software Exchange. Unfortunately, he ignored my request and printed the list to help him pad out his final issue of INSIDE INFO.

In the meantime, I took over the Software Exchange. In the two weeks after the December meeting, I had to fill orders for almost 60 disks and cassettes. The sudden demand was probably due to a combination of the normal pre-Christmas rush and the publication of the new list of software in INSIDE INFO No.16. It was during this period that some serious problems started to surface. Things like ... the software on disk was sometimes different to that listed in the magazine ... the "master" disk and the "working" disk were always different ... programs wouldn't load or wouldn't run properly ... there was no documentation ... and so on. So it turned out that my suspicions were correct, but that is little consolation now. Between Chris and Brian, my job has been made damn near impossible and a lot of members will be disappointed when I can't produce the software as listed in INSIDE INFO No.16 ... or it won't load, won't run, etc. Thanks for nothing fellers!

So, the damage has been done. What can I do to fix it? After a great deal of despair and several attempts to try and clean things up, I've decided to scrap most of the old software (as detailed below) and virtually start the Software Exchange from scratch. This decision was not made lightly, but was made so that I could provide a better service for members. There will be a two month transition period where you can still buy the old software (although I wouldn't recommend it) and then it will be dropped completely. I will then begin to introduce a whole lot of new software. This whole business is going to be a mammoth task, so I've broken it down into four stages.

<u>Stage I:</u> Sort through the existing software to work out what we've got, what works and what doesn't. Fill all current orders and fix complaints about past orders.

<u>Stage II:</u> Work out what type of software people want and what languages they use in order to better satisfy their needs in the revamped Software Exchange. This could be accomplished by a survey in INSIDE INFO.

<u>Stage III:</u> Destroy (i.e. reformat) all the rubbish and re-issue all the good disks with some sort of consistent file organisation. Some of the good software also requires testing and/or debugging. Also prepare some sort of documentation and improve disk labels, packaging and mailing arrangements.

<u>Stage IV:</u> Release a whole batch of new software that I've been working on for the past 12 months. Send to various overseas sources for the latest and greatest public domain software which can be added to our own Software Exchange. Look into licensing of selected copyright programs from both Australian and overseas authors.

This is obviously the "ideal" plan and I don't expect to be able to stick to it rigidly. There will be overlapping of various stages, but that doesn't matter, so long as the job gets done in the long run. Stage I is well under way and should hopefully be finished by the time you read this. In the meantime, there are some earth shattering announcements regarding the old software.

1. THERE WILL BE NO MORE CASSETTE BASED SOFTWARE AFTER 31st MARCH, 1985. Last year, there were two blokes looking after the Software Exchange. One was solely responsible for cassettes. It turns out that there was only one order for cassettes for the whole year! The committee apparently felt (quite reasonably) that this was insufficient response to warrant a separate committee position and the position has now been dropped. I was not aware that this would happen until after the election of the committee at the A.G.M. and hence found myself unexpectedly lumbered with the responsibility of both disks and cassettes. I have neither the time, the inclination nor the resources to support cassettes. I had two orders for cassettes in the pre-Chistmas rush and found that copying a cassette takes well over an hour without verifying the programs!

Apart from all this, cassettes are unreliable and much of the software (especially the utilities) is not suitable for cassettes anyway! Therefore, there will be no more cassette based software after 31st March, 1985. This gives you two months to get in your last orders for cassettes. (Orders for blank cassettes are unaffected. We still have about ten boxes of blank C45 cassettes. These will continue to be sold at the ridiculously low price of $9 per box of 10 until stocks run out.)

2. GAMES #1-3 AND UTILITIES #1-3 WILL BE SCRAPPED AFTER 31st MARCH, 1985. I have had nothing but trouble with these disks. Members have been complaining that programs don't load or don't run as expected. I have also had trouble with disk contents varying from disk to disk or being different to what was shown in INSIDE INFO No.16. As nearly all the programs are copied from readily available sources (such as magazine programs and ANTIC's public domain disks), it seems pointless to salvage them. Nearly all programs will be available on new disks over the coming months. You can still order the old disks before 31st March, 1985, but I wouldn't advise it! Some contents will vary slightly from the list printed in INSIDE INFO No.16 and I can't guarantee that the programs will run properly (or even load properly). A couple of the disks have documentation on the disk itself, but otherwise there is no documentation. Games #1 is riddled with bugs. Apple Cider has a bug which causes the game to finish prematurely. Goblin is unplayable. Doggies had some typing errors and has been deleted because the correct version is on INSIDE INFO Vol.1. Chicken has a bug which is corrected on a forthcoming disk. Lines does not work on XL computers because the machine language routine uses illegal jumps into the Operating System. Hangman is on one of the Education disks. The remainder of the programs are on ANTIC's Public Domain Games #1 and 2. The Lunar Lander game on Games #2 is a copyrighted program sold by Adventure International and has therefore been deleted from all copies of this disk. The remainder of the programs are from magazines. All programs from Games #3 will be on future disks. All programs on Utilities #1 except Massacre are on ANTIC's Public Domain Utilities #1. All programs on Utilities #2 are on ANTIC's Public Domain Utilities #2 or are from magazines. I was given only one copy of Utilities #3 and accidentally copied over the top of it. However, most of the programs were from Eugene ACE's Utilities #3, so that's what I'll send you if you order before 31st March, 1985. Nevertheless, most programs will be on future disks.

3. ALL EDUCATION DISKS WILL BE REVISED AND EXPANDED AFTER 31st MARCH, 1985. Nearly all the programs on the Education disks have been lifted from two series of Education disks which we obtained from Eugene ACE. (These are known as the ERACE disks and SOFTSWAP disks.) Unfortunately, a number of bugs have been introduced in the process. Just as an example, MICROTXT.WP on Education #1 was originally written to run with a cassette recorder. Somebody has tried to modify it to use with a disk drive. As a result, it now doesn't run on anything! Many of the programs require documentation to understand how to use them, but none has been prepared. Our friends in Eugene ACE have gone to a lot of trouble to prepare their Education disks and it seems pointless to rehash their work. Therefore, the old Education disks will be replaced by the original six ERACE disks and four SOFTSWAP disks (with modifications for Australian conditions) after 31st March, 1985. I also hope to release some PILOT disks if there is any interest. These are again from Eugene ACE and are generally educational in nature. Please let me know if you're interested in PILOT.

4. ALL OUTSTANDING COMPLAINTS MUST BE SENT BY 31ST MARCH, 1985. Of all the junk that was dumped on me when I took over the Software Exchange, the one thing that surprised me most was the number of letters of complaint. They usually read something like"...Isent a cheque for 3 disks over 2 months ago and they haven't arrived yet. What's going on?...". This has got to stop. All orders I've had have been sent out less than a week after I received them. This should continue if goes well. I believe all orders have now been satisfied, but if yours never arrived, please send full details. (And no bogus claims thank you. We've got records of all past orders.) Secondly, as mentioned earlier, I've discovered that many of the programs on past disks just wouldn't load. If you had any sort of loading problems at all, please return the faulty disk(s) by 31st March, 1985, tell me exactly what's wrong and I'll send you a replacement. No replacements without the original disk! Thirdly, if you've ever submitted any software to the Software Exchange, you should have got your disk back. If you didn't, please send full details before 31st March, 1985 and I'll send you some software to replace it.

5.ALL SUGGESTIONS FOR IMPROVEMENTS TO THE SOFTWARE EXCHANGE SHOULD BE SENT AS SOON AS POSSIBLE. I am open to all suggestions. All suggestions will be considered, but please get them in as soon as possible. I'd like to incorporate them in a survey in the next issue of INSIDE INFO.

Well dear reader, I hope you're still with me after all that! I'm sorry it was so long, but it had to be said. The next couple of months are going to be terribly difficult for me, so please exercise some patience while I straighten this mess out. To make things a little easier, please avoid ordering software until after 31 March unless you're really desperate or you particularly want the old Games, Utilities or Education disks. (Orders for blank disks are unaffected.) If everyone co-operates, we'll soon have the best Software Exchange in the southern hemisphere.

Stay tuned for news of new developments at coming meetings and in future issues of INSIDE INFO. If you can make it to meetings, please do so. I'll be demonstrating new disks as they're released and selling them right there on the spot! And believe me, there's some pretty crash hot software coming along in future!

PROGRAM REVIEW

PRINTWIZ
from Allen Macroware P.O. Box 2205, 1906 Carnegie Ln.,Redondo Beach, CA.90278
Reviewed by Chris Fitzgerald (Clyde, N.S.W.)

A number of people have been asking about the program that has been used to do the screen dumps that have been appearing in Inside Info.

Printwiz has got to be one of the best programs on the market for the Atari, and at $US29.95 plus $US2.50 postage, it's great value too!

NOTE: Allen Macroware don't accept Visa/Mastercard but they reply quickly -you'll get your order within three weeks.

Printwiz is available on disk only and has recently been updated so there are 17 files on the disk. Printwiz supports the following printers:- Mannesman-Talley Spirit, DMP-80, Panasonic, KXP1090, Okidata, Epson, NEC, Prowriter and Gemini.

SCREEN DUMP PROGRAM : The main program is an auto-boot program which can be used with the BASIC cartridge, the Assembler Editor cartridge or no cartridge at all. It occupies just over 5 pages (about 1300 bytes) and will allow you to dump virtually anything to the printer as long as it doesn't conflict with the program and is not a player-missile. There are several options for the print-out -you can: centre it, print in inverse mode, use single, double, triple or quadruple dot density (which can affect the size of the print-out and depends on the printer used), print in double or normal height . There are also the print, abort and reset options -all of which are selected using the control-shift keys in conjunction with another pneumonically coded key.

Two nice features of this program are:-

* hitting SYSTEM RESET resets all of the options to the default values.

* an in-built mini-DOS allows you to access several DOS commands without clearing the computers memory. The menu is accessed by typing DOS in the normal manner and has the following functions:- Directory, Lock & Unlock files, Rename, Format disk, Binary Load, Run at Address, Write DOS.SYS File, Hex to Dec & Dec to Hex converter and Return to Cartridge. Using BASIC, I have found very few programs which won't dump to the printer successfully.

PROGRAM LISTER : The BASIC lister progra m runs seperately and is LOADed through BASIC.   It will read any disk file in LISTed format straight from the disk and print it out in ATASCII in either 40 or 8 0 columns.   One fault in the program is that although it paginates the print-out, it is set for fan-fold or roll paper and doesn't pause for single sheet paper.

FONTS : Printwiz comes with three different fonts:- Script, Computer and Modern. There is also a program to load them into computer memory so that you can dump text to the printer in the different fonts in GRAPHICS 0, 1, 2 or any combination of them.

b

<u>LABELER</u> : This program is also in BASIC and is used to print out multiple copies text (in ATASCII) for adhesive labels.

<u>CALENDER</u> : Is a program which asks you to input the number of a month and a year and then "draws" the calender onto the screen ready for dumping to the printer.

<u>GRAPHICS</u> : There are also several BASIC programs which will load and display various GRAPHICS screens including those created with Micropainter, Graphics Master, Paint, Drawit and the Koala Pad. Hints and tips for doing all of this are laid out in the comprehensive instruction manual.

Overall, I am more than pleased with Printwiz. I can highly recommend it to anyone with a dot-matrix printer who wants to get the most out of it. It has proven to be a very useful aid in the design and lay out of title screens.

☆☆☆

OPTICAL ILLUSION

by Nigel Delaforce

Here is an interesting little program which uses ANTIC mode 4 characters and colour rotation to display an optical illusion. It will run on any cassette or disk based system with at least 16K.

The top of memory is moved down 8 pages to store the new character set which was created using the ANTIC mode 4 character editor in BYTE December 1982. The new character set was originally stored on disk and loaded when needed, but this had to be converted to DATA statements to print in INSIDE INFO.

The colour rotation routine is stored in page 6 and carried out during the Vertical Blank Interupt (VBI).

When you get tired of looking at the display, press any key to restore the system back to normal.

```
1 REM ##############################
2 REM #      OPTICAL ILLUSION      #
3 REM #      by Nigel Delaforce     #
4 REM # Published by Atari Computer #
5 REM #    Enthusiasts (N.S.W.)     #
6 REM #        February 1985        #
7 REM ##############################
10 REM LOAD NEW CHARACTER SET
20 RAMTOP=PEEK(106):POKE 106,RAMTOP-8:
CHBASE=RAMTOP-4
30 GRAPHICS 18:POSITION 5,5:PRINT #6;"
REDEFINING":POSITION 3,6:? #6;"CHARACT
ER SET"
40 RESTORE 350:FOR I=256*CHBASE TO 256
*CHBASE+511:READ A:POKE I,A:NEXT I
50 REM NEW DISPLAY LIST
60 POKE 82,0:GRAPHICS 0:POKE 559,0:DL=
PEEK(560)+256*PEEK(561):POKE DL+3,68
70 FOR I=DL+6 TO DL+28:POKE I,4:NEXT I
:POKE 756,CHBASE
80 POKE 708,202:REM LIGHT GREEN
90 POKE 709,254:REM YELLOW
100 POKE 710,242:REM DARK BROWN
110 POKE 712,0:REM BLACK BACKGROUND
120 POKE 559,34
130 FOR X=0 TO 39 STEP 20
140 FOR Y=0 TO 23 STEP 12
150 POSITION X,Y:PRINT "ABCCCCCCCCCCCC
CCDEF"
160 POSITION X,Y+1:PRINT "GHIJKLLLLLLL
```

```
LLMNOPQ"
170 POSITION X+1,Y+2:PRINT "RSTUV
  WXYZQ"
180 POSITION X+2,Y+3:PRINT "012U3
4XYZQ"
190 POSITION X+2,Y+4:PRINT "56789!   4
XYZQ"
200 POSITION X+3,Y+5:PRINT ":?#$%& 4XY
ZQ"
210 POSITION X+4,Y+6:PRINT "'@(C)4XYZQ
"
220 POSITION X+5,Y+7:PRINT "*.+-XYZQ"
230 POSITION X+6,Y+8:PRINT ",.[YZQ"
240 POSITION X+7,Y+9:PRINT "]YZQ"
250 NEXT Y:NEXT X
260 REM ANTIC 4 COLOUR ROTATION
270 RESTORE 280:FOR I=1536 TO 1602:REA
D A:POKE I,A:NEXT I
280 DATA 104,169,0,141,67,6,141,69,6,1
62,6,160,19,169,7,32,92,228,96,173,69,
6,208,39
290 DATA 238,67,6,169,30,205,67,6,208,
29,173,198
300 DATA 2,141,68,6,173,197,2,141,198,
2,173,196,2,141,197,2,173,68,6,141,196
,2,169,0,141,67,6,76,98,228,0
310 X=USR(1536):POKE 764,255
320 IF PEEK(764)=255 THEN 320
330 POKE 106,RAMTOP:POKE 82,2:GRAPHICS
 0:POKE 1605,1:POKE 764,255:END
```

```
340 REM NEW CHARACTER SET
350 DATA 0,0,0,0,0,0,0,0,0,0,0,0,0,0,6
4,64,15,3,3,0,0,0,0,0,0,245,245,253,253
360 DATA 255,255,255,255,85,85,85,85,8
5,85,85,213,64,80,80,84,84,85,85,85,0,
0,0,0,0,0,0
370 DATA 64,15,15,3,3,0,0,0,0,213,245,
245,245,253,253,255,255,64,64,80,80,84
,84,85,85,63,15
380 DATA 15,3,3,0,0,0,213,213,245,245,
253,253,253,255,63,63,15,15,3,3,0,0,85
,87,87,95,95
390 DATA 127,127,63,255,255,255,255,25
5,255,255,255,0,6,12,24,48,96,64,0,255
,255,255,63,63,15,15,15
400 DATA 253,253,253,255,255,255,255,2
55,85,85,85,85,85,213,213,245,0,0,0,0,
0,64,64,64,0,3,3
410 DATA 15,15,63,63,255,3,3,0,0,0,0,0
,0,255,255,255,255,63,63,15,15,245,253
,253,255,255,255
420 DATA 255,255,85,85,85,85,85,85,213
,213,80,80,84,84,85,85,85,15,3,3,0,
0,0,0,0,0
430 DATA 0,0,0,0,0,0,0,6,12,24,48,24,1
2,6,0,0,0,126,0,0,126,0,0,96,48,24,12
440 DATA 24,48,96,0,255,255,255,255,25
5,63,63,15,255,255,255,255,255,255,63,
63,3,3,15,15,63,63,255
450 DATA 255,85,213,213,245,245,245,25
```

```
3,253,85,85,85,85,85,85,85,85,21,69,81
,81,81,84,84,84,85,85
460 DATA 85,85,85,85,85,85,0,64,64,80,
80,84,84,85,255,63,63,15,15,3,3,0,255,
252,243,243,207
470 DATA 207,63,255,0,85,213,213,213,2
45,245,253,0,85,85,85,85,85,85,85,170,
170,170,106,106,80,80,84
480 DATA 170,170,170,170,170,0,0,0,170
```

```
,170,170,170,170,63,63,255,170,170,170
,170,170,255,255,255,168,160,162
490 DATA 138,138,234,234,170,170,170,1
70,170,170,170,170,170,170,170,168,168,160
,160,128,128,0,255,63,63,63,15,15
500 DATA 3,3,253,253,255,255,255,255,2
55,255,85,85,85,85,213,213,245,245,84,
84,85,85,85,85,85,85,0
510 DATA 0,0,0,64,64,80,80,0,3,3,15,15
```

```
,63,63,255,255,255,255,255,255,255,255
,255,255,254,254,250
520 DATA 250,234,234,170,170,170,170,1
70,170,170,170,170,63,207,207,243,243,
252,252,255,0,64,96,48,24,12,6
530 DATA 0,63,63,63,15,15,3,3,0,0,8,28
,54,99,0,0,0,0,0,0,0,0,0,0,255,0
```

```
10 ;################################
20 ;#    SOURCE CODE FOR COLOUR    #
30 ;# ROTATION IN OPTICAL ILLUSION #
40 ;#       by Nigel Delaforce     #
50 ;# Published by Atari Computer  #
60 ;#    Enthusiasts (N.S.W.)      #
70 ;#        February 1985         #
80 ;################################
90 ;
0100  *=$0600
0110  COLOR1=708
0120  COLOR2=709
0130  COLOR3=710
0140  SETVBV=$E45C
0150  XITVBV=$E462
0160  COUNT=$063B

0170 TEMP=$063C
0180 ;
0190 ;ROUTINE TO SET VBI VECTOR
0200 ;
0210 PLA
0220 LDA #$00
0230 STA COUNT
0240 LDX #$06
0250 LDY #$10
0260 LDA #$07
0270 JSR SETVBV
0280 RTS
0290 ;
0300 ;VBI SERVICE ROUTINE
0310 ;
0320 INC COUNT

0330 LDA #$1E
0340 CMP COUNT
0350 BNE EXIT
0360 LDA COLOR3
0370 STA TEMP
0380 LDA COLOR2
0390 STA COLOR3
0400 LDA COLOR1
0410 STA COLOR2
0420 LDA TEMP
0430 STA COLOR1
0440 LDA #$00
0450 STA COUNT
0460 EXIT JMP XITVBV
0470 .END
```

LAZY DUMP

by K.J.Bricknell

LAZYDUMP is a screen dump program for ATARI computers and EPSON printers. Its most endearing feature, which arises from the fact that it is written entirely in BASIC, is that it is more than a trifle slow.

LAZYDUMP will dump all non-GTIA graphics screens, ie, modes 3 to 8. The program 'knows' what mode it is dumping by PEEKing at DINDEX [Decimal-87, Hex-$57] before it begins its long and agonizing task.

The program should be LISTed to disk or tape and merged with your screen-drawing program using ENTER "D:LAZYDUMP.LST". LAZYDUMP begins at line 29990, so the highest line number in your main program should be less than 29990.

Colours in the four colour modes are represented by white, black and two shades of grey in the printout.

Very occasionally you may receive a corrupted printout. If this occurs, do not shoot the program. The problem arises from a well-known bug in the Operating System which causes the printer to appear to give up and depart for some distant planet for a few seconds during printing operations.

```
1 REM ###############################
2 REM #    LAZYDUMP SCREEN DUMPER   #
3 REM #      by K. J. Bricknell     #
4 REM # Published by Atari Computer #
5 REM #    Enthusiasts (N.S.W.)     #
6 REM #        February 1985        #
7 REM ###############################
29995 REM GET GRAPHICS MODE AND INITIA
LIZE PRINTER
30000 CLR :GMODE=PEEK(87):OPEN #1,8,0,
"P:":PRINT #1;CHR$(27);"@";CHR$(27);"A
";CHR$(8);

30005 REM IF FOUR-COLOUR MODE BRANCH T
O SEPARATE ROUTINE
30010 IF GMODE=3 OR GMODE=5 OR GMODE=7
 THEN 30280
30015 REM TWO-COLOUR MODE ROUTINE
30020 IF GMODE=4 THEN DIM BYTE(79):COL
S=79:ROWS=47:ROWSTEP=1:STRIKE=12
30030 IF GMODE=6 THEN DIM BYTE(159):CO
LS=159:ROWS=94:ROWSTEP=2:STRIKE=6
30040 IF GMODE=8 THEN DIM BYTE(319):CO
LS=319:ROWS=188:ROWSTEP=4:STRIKE=3
30045 REM Read screen pixels and conve

rt to bit-image data
30050 FOR RB=0 TO ROWS STEP ROWSTEP
30060 FOR I=0 TO COLS:BYTE(I)=0:NEXT I
30070 FOR SL=0 TO ROWSTEP-1
30080 FOR C=0 TO COLS
30090 LOCATE C,RB+SL,PC
30100 IF PC=0 THEN 30190
30110 IF PC=1 AND SL=0 AND GMODE=4 THE
N BYTE(C)=255:GOTO 30180
30120 IF PC=1 AND SL=0 AND GMODE=6 THE
N BYTE(C)=BYTE(C)+240
30130 IF PC=1 AND SL=0 AND GMODE=8 THE
```

```
N BYTE(C)=BYTE(C)+192
30140 IF PC=1 AND SL=1 AND GMODE=6 THE
N BYTE(C)=BYTE(C)+15:GOTO 30180
30150 IF PC=1 AND SL=1 AND GMODE=8 THE
N BYTE(C)=BYTE(C)+48
30160 IF PC=1 AND SL=2 AND GMODE=8 THE
N BYTE(C)=BYTE(C)+12
30170 IF PC=1 AND SL=3 AND GMODE=8 THE
N BYTE(C)=BYTE(C)+3
30180 COLOR 0:PLOT C,RB+SL
30190 NEXT C
30200 NEXT SL
30205 REM Print routine
30210 PRINT #1;CHR$(27);"L";CHR$(192);
CHR$(3);
30220 FOR C=0 TO COLS
30230 FOR B=1 TO STRIKE:PRINT #1;CHR$(
BYTE(C));:NEXT B
30240 NEXT C:PRINT #1
30250 NEXT RB
30260 FOR S=1 TO 5:PRINT CHR$(253);:NE
XT S
30270 END
30275 REM FOUR-COLOUR MODE ROUTINE
30280 DIM BYTE(959):FLIP=0
30290 IF GMODE=3 THEN COLS=39:ROWS=23:
ROWSTEP=1:REPEAT=1
30300 IF GMODE=5 THEN COLS=79:ROWS=47:
ROWSTEP=1:REPEAT=0
30310 IF GMODE=7 THEN COLS=159:ROWS=94
:ROWSTEP=2:REPEAT=0
30320 FOR RB=0 TO ROWS STEP ROWSTEP
30330 FOR I=0 TO 959:BYTE(I)=0:NEXT I
30340 FOR SL=0 TO ROWSTEP-1
30350 FOR C=0 TO COLS
30360 LOCATE C,RB+SL,PC
30370 IF PC=0 THEN 30460
30375 REM If mode 3 or 7, branch to bi
t-image data conversion routine
30380 IF GMODE=3 THEN 30550
30390 IF GMODE=7 THEN 30610

30395 REM Mode 5 bit-image data conver
sion routine
30400 IF PC=1 THEN FOR EL=C*12 TO C*12
+11:BYTE(EL)=255:NEXT EL:GOTO 30450
30410 IF PC=2 THEN FOR EL=C*12 TO C*12
+10 STEP 2:BYTE(EL)=170:NEXT EL
30420 IF PC=2 THEN FOR EL=C*12+1 TO C*
12+1+10 STEP 2:BYTE(EL)=85:NEXT EL:GOT
0 30450
30430 IF PC=3 THEN FOR EL=C*12 TO C*12
+8 STEP 4:BYTE(EL)=170:NEXT EL
30440 IF PC=3 THEN FOR EL=C*12+2 TO C*
12+2+8 STEP 4:BYTE(EL)=85:NEXT EL
30450 COLOR 0:PLOT C,RB+SL
30460 NEXT C
30470 NEXT SL
30475 REM Print routine
30480 FOR L=0 TO REPEAT
30490 PRINT #1;CHR$(27);"L";CHR$(192);
CHR$(3);
30500 FOR B=0 TO 959:PRINT #1;CHR$(BYT
E(B));:NEXT B:PRINT #1
30510 NEXT L
30520 NEXT RB
30530 FOR S=1 TO 5:PRINT CHR$(253);:NE
XT S
30540 END
30545 REM MODE 3 BIT-IMAGE DATA CONVER
SION ROUTINE
30550 IF PC=1 THEN FOR EL=C*24 TO C*24
+23:BYTE(EL)=255:NEXT EL:GOTO 30450
30560 IF PC=2 THEN FOR EL=C*24 TO C*24
+22 STEP 2:BYTE(EL)=170:NEXT EL
30570 IF PC=2 THEN FOR EL=C*24+1 TO C*
24+1+22 STEP 2:BYTE(EL)=85:NEXT EL:GOT
0 30450
30580 IF PC=3 THEN FOR EL=C*24 TO C*24
+20 STEP 4:BYTE(EL)=170:NEXT EL
30590 IF PC=3 THEN FOR EL=C*24+2 TO C*
24+2+20 STEP 4:BYTE(EL)=85:NEXT EL
30600 GOTO 30450

30605 REM MODE 7 BIT IMAGE DATA CONVER
SION ROUTINE
30610 IF PC=1 AND SL=0 THEN FOR EL=C*6
TO C*6+5:BYTE(EL)=240:NEXT EL
30620 IF PC=1 AND SL=1 THEN FOR EL=C*6
TO C*6+5:BYTE(EL)=BYTE(EL)+15:NEXT EL
:GOTO 30450
30630 IF PC=2 AND SL=0 THEN FOR EL=C*6
TO C*6+4 STEP 2:BYTE(EL)=160:NEXT EL
30640 IF PC=2 AND SL=0 THEN FOR EL=C*6
+1 TO C*6+1+4 STEP 2:BYTE(EL)=80:NEXT
EL:GOTO 30450
30650 IF PC=2 AND SL=1 THEN FOR EL=C*6
TO C*6+4 STEP 2:BYTE(EL)=BYTE(EL)+10:
NEXT EL
30660 IF PC=2 AND SL=1 THEN FOR EL=C*6
+1 TO C*6+1+4 STEP 2:BYTE(EL)=BYTE(EL)
+5:NEXT EL:GOTO 30450
30670 IF PC=3 AND SL=0 AND FLIP=0 THEN
FOR EL=C*6 TO C*6+4 STEP 4:BYTE(EL)=1
60:NEXT EL
30680 IF PC=3 AND SL=0 AND FLIP=0 THEN
BYTE(C*6+2)=80
30690 IF PC=3 AND SL=0 AND FLIP=1 THEN
FOR EL=C*6 TO C*6+4 STEP 4:BYTE(EL)=8
0:NEXT EL
30700 IF PC=3 AND SL=0 AND FLIP=1 THEN
BYTE(C*6+2)=160:GOTO 30750
30710 IF PC=3 AND SL=1 AND FLIP=0 THEN
FOR EL=C*6 TO C*6+4 STEP 4:BYTE(EL)=B
YTE(EL)+10:NEXT EL
30720 IF PC=3 AND SL=1 AND FLIP=0 THEN
BYTE(C*6+2)=BYTE(C*6+2)+5
30730 IF PC=3 AND SL=1 AND FLIP=1 THEN
FOR EL=C*6 TO C*6+4 STEP 4:BYTE(EL)=B
YTE(EL)+5:NEXT EL
30740 IF PC=3 AND SL=1 AND FLIP=1 THEN
BYTE(C*6+2)=BYTE(C*6+2)+10
30750 FLIP= NOT FLIP:GOTO 30450
```

TRAMIEL UPDATE?

This is excerpt from an article by C.Nicholas published in one of the Club's exchange newsletters belonging to a users group whose name I haven't been able to locate. The article relates to another article printed in the November 5 issue 1984 of INFOWORLD (a well established American computer magazine), therefore we are meant to take it seriously. Some of the details are definite eye openers, especially the 'estimated' prices.

"...What Jack Tramiel Says He's Going To Do Dept. Currently, the new head of Atari is thinking along the lines of the 3 1/2-inch disk for his new personal computer. Insiders tell me the computer shapes up as follows.

It will be based on a 6-8 MHz 68000 (32 bit microprocessor) and be similar to the Macintosh in functionality. It will come with a minimum 128K configuration and have 600 by 400 graphics resolution. The number of colours has yet to be determined. The computer will have a built-in, eight channel sound synthesis system and be equipped with a MIDI interface-- the music synthesiser interface standard port developed by Roland, the music synthesiser company.

Some insiders are calling it the ATARI MAC because it is designed to run an icon-based operating system similar to that of the Macintosh.

It will contain at least one built-in Sony type, 3 1/2 inch disk drive.

The computer will utilise extensive custom VLSI (very-large-scale-integration) chips for sound and graphics.

I have it on good authority that the target price will be $300(U.S.). I have to assume that means with no disk drive. It will be manufactured in the Orient.

Note:- Tramiel is also lining up some 5 to 10 megabyte hard disks that he expects to sell for $200 with this machine! This is choice information for you investors and developers; take it seriously.

Earlier speculation was that Tramiel would go after AMIGA, a company that has reportedly designed a similar computer to these specifications. My thinking is that COMMODORE got wind of Tramiel's specs for the ATARI MAC from one of the engineers Tramiel lured away from COMMODORE--possibly still on the COMMODORE payroll. COMMODORE figured it had better buy AMIGA just in case Tramiel was depending on something to come out of the AMIGA-ATARI chip designing joint venture. Good strategy move by COMMODORE.

I figure that an ATARI MAC could be made and sold with a disk and monitor for $595 (U.S.), assuming COMMODORE 64/VIC 20 quality levels..."

That was a direct word for word quote from that particular issue of INFOWORLD. Whether this is fact or rumour is open to debate. Personally, I've got my fingers crossed!

MINDLINK SYSTEM

In the way of new peripherals to be released in the near future, the MINDLINK system seems the most interesting. It is an electronic headband which reads the impulses from muscles in your forehead and directs the action on the screen.

HIDDEN SECRETS IN ATARI GAMES

For owners of DIG-DUG, try this little amusing trick, which also requires an ATARI 400 or 800.

Plug a joystick into port #4 and boot up the DIG-DUG cartridge. Press the trigger and the OPTION key simultaneously and you will see the "SECRET MESSAGE".

SPEECH RECOGNITION

Hardware buffs may be interested to know that a company called BROOK-TRONIX have a FAZER available on the market. The FAZER is capable of giving the ATARI speech Recognition. It simply connects to the joystick ports and you speak away! You also have the ability to play games without using a joystick!

SAVING KOALA PAD PICTURES

To save standard format (not compressed) pictures, press INSERT while the picture is being displayed. To load it in, go to the drawing screen and press CLEAR. The saved picture will have the filename 'PICTURE' on the disk.

Yet another way to save/load Koala Pad standard format pictures: with the picture on the screen, press '>' to save, or '<' to load it back.

THE MASTER MEMORY MAP

Remember a few years ago, there was a 30 page booklet on ATARI memory locations by the name of 'THE MASTER MEMORY MAP'? Well it seems there have been two updates since, and it has now grown to 361 pages with 13 appendices, 67 figures and covers everything including the XL computers. Reston now markets it instead of Educational Software for $16 (U.S.). I'll print the address as soon as I find it.

XL POKE'S

Here are some XL memory locations for XL owners to fiddle around with:-

LABEL	DECIMAL	HEX	FUNCTION
NGFLAG	1	$1	Used by the power-up self-testing routines. If equal to 0 then there is a problem and the MEMORY TEST will run.
VBREAK	566,567	$236 $237	BREAK key interupt vector. If you write your own BREAK key handler routine (in machine code) you must change this vector to point to it. This vector is also used in the 400/800 (Revision B, OS ROM's).
CHSALT	619	$26B	Character Set Pointer. Poke with 204 to select International Char. Set.
KEYDIS	621	$26D	Keyboard Disable.
FINE	622	$26E	Fine Scroll Flag. Poke with a non-zero value to fine scroll in GRAPHICS 0. Try LISTing a program.
KRPDEL	729	$2D9	Automatic Key Delay. Default=40. Poke with 25 for .5 second delay.
KEYREP	730	$2DA	Automatic Key Repeat Rate.
NOCLIK	731	$2DB	Key Click Disable. Poke with a non-zero or zero to enable or disable keyboard click.
GINTLK	1018	$3FA	Cartridge Flag.Cartridge in slot=1 No Cartridge=0.

BOOK REVIEW

THE BEST ATARI SOFTWARE
By the Editors of Consumer Guide
Reviewed by Garry Francis

To put it simply, this is a book of software reviews. The cover says it was written by the editors of Consumer Guide (whatever that is), but the reviews were actually done by Jim Bumpas (co-editor of the Eugene ACE Newsletter) and a team of two dozen Atari users. This makes it a far more creditable book than if it HAD been done by the editors of Consumer Guide.

Jim Bumpas gave the background to the book in the March 1984 issue of the Eugene ACE Newsletter as follows:

"...Last summer, Consumer Guide magazine called Mike Dunn to ask him to write a book of reviews of top Atari software for a fall publication. Mike said he had no time and suggested they ask me. They wanted someone from the famous ACE to do the job. So they did. And I did. I put together a team of reviewers from among ACE members in California and Oregon and we finished the work in less than 3 months. The book of reviews of the Best Atari Software has now been on the market for over a month. It contains reviews of nearly 200 pieces of the best software as of September, 1983. We did more than 200 reviews, but they omitted about 30 of them, including Data Perfect, Armudic, Synassembler and some other good items. They also failed to credit all the people working on the project. Even my name appears only in small print on an inside page. Each reviewer wrote about the items they reviewed. I rewrote each one at least twice. And editors rewrote each review at least twice more after I sent them off. Nevertheless, the book is one of the most helpful of its type on the market - especially given its price..."

The book is split into 8 categories: word processing, business, home, education, networking, strategy games, arcade games and programming aids. Most of the reviews are short and accurate, but a few suffer from total ignorance on the part of either the editors of Consumer Guide or the reviewers. Fortunately, these are in the minority. As an example, excuse me if my bias is showing, but the only Adventures covered are Zork, Deadline, Starcross and The Dark Crystal. It is blatantly obvious that the reviewers haven't even played the games! The information in the reviews was probably lifted from the programs' documentation. And how could you possibly include The Dark Crystal with the "best" Atari software?

Each program has been rated on a scale of 1 to 10. The editors claim that this was the average of scores given by the leaders of over 100 users' groups throughout U.S.A. and Canada. Now that's what I like to see! Only the programs that averaged 5.0 or better are included in the book. I was pleased to see that this includes some public domain software such as SOFTSWAP (educational software from the San Mateo County Office of Education which rated 7.0) and AMODEM (Jim Steinbrecher's terminal program which rated 7.1). Both will be available from our own Software Exchange over the coming months.

Unfortunately, as the book only covers software released prior to September, 1983, it is somewhat out of date. It obviously doesn't include any of the latest software and some reviews cover superseded versions of the programs. Three that suffer in this respect are Letter Perfect (which rated 8.6), AMODEM (which has already been mentioned) and MAC/65 (which rated 7.8). You could expect the updated versions to rate much higher. Nevertheless, it's a useful book and fairly cheap at $8.95. Our review copy came from the ANZ Book Co. Pty. Ltd.

[Footnote: Just out of interest, the highest rating programs in each of the categories were AtariWriter 8.7, Visicalc 8.9, Financial Wizard 7.5, My First Alphabet 8.2, T.H.E. Smart Terminal 7.6, Combat Leader 9.5, Blue Max 9.2 and ACTION! and The Arcade Machine tied with 8.6.]

COMPUTER CRICKET

by K.J.Bricknell (Holder, A.C.T.)

[Editor's Note: This program had been originally submitted in answer to the Editor's plea in the last issue. Subsequently it occupied almost a whole disk along with extremely professional documentation. To be printed fully in Inside Info would mean devoting a whole issue to just one program. It was decided to print the accompanying documentation and the program itself would be available through the Software Exchange. After all, how many of you would type in an 18 page program?]

Computer Cricket is a simulation of the game of limited-over cricket. The game may be played by either one or two players. The player takes the part of captain of one (or both) of the opposing teams. As captain, the player has a considerable say in the selection of his team and of course, he has the final say in both batting order and selection of bowlers.

Six touring parties are available from which to choose opponents for a particular match. These touring parties are from Australia, West Indies, Pakistan, England, India and New Zealand.

TO BEGIN

To begin play, simply insert the disk and turn the computer on. The program will run automatically. After the main program has loaded you will be presented with the title screen and invited to make a choice between two options, namely, Load Old Game or New Game. The Load Old Game option may be chosen if you wish to continue play in an unfinished game which you have previously saved to disk. (The procedure for this option will be discussed later.) For the present, however, select the New Game option.

From this point on, everything is controlled by the joystick and trigger.

STARTING A NEW GAME

After a short pause (during which the computer gets a few of the basics organised), you will be presented with another screen and invited to select the two nations to play. Use the joystick to move the flashing cursor vertically and press the trigger when the cursor is adjacent the desired nation.

After you have selected two nations, the touring party for the first selected nation appears. As stated in the flashing message at the bottom of the screen, you should now select your team in batting order. Press the trigger to kill the flashing message and initiate team selection. Use the joystick to move the cursor vertically and press the trigger when the cursor is adjacent the desired player's name.

To assist you in keeping track of where you are, each player's name will, when selected, disappear from the 'Touring Party' column and appear in the 'Selected Team' column. Note that you may correct any selection errors, or re-select your team at the completion of initial selection, by pressing the ESC key. Also note that the outcome of the game will depend to a considerable extent on both the players you select and the order in which you select them. Put good batsmen at

the head of the batting order by all means but make sure you have good bowlers and the odd all-rounder in your line-up as well.

When you have selected the eleven players for the first team, press the trigger to proceed to the selection of the second team. Repeat the selection process. When you (or your opposing captain) are happy with the second eleven man side, press the trigger to proceed to the toss.

THE TOSS AND SELECTION OF TEAM TO BAT FIRST

After a short pause (during which the toss routine is loaded from disk, a coin will appear and the appropriate team captain will be invited to call the toss. When the call is made, the coin spins and alights on either 'heads' or 'tails'. The captain who wins the toss will then be invited to indicate which team is to bat first. Following this decision, there will be a brief interlude while the covers are removed (ie, more code is loaded from disk).

THE MAIN MENU

Following the removal of the covers, the main menu appears. As you will see, this menu offers a number of options, the first four of which are chosen through the joystick. The options are:-

1. Display Scoreboard – first team.
2. Display Scoreboard – second team.
3. Select bowler for next over.
4. Richie Benaud's summary.
5. Save game to disk (chosen with the ESC key).

DISPLAY SCOREBOARDS: Calling up scoreboards is quite simple. Use the joystick and trigger to select the required team's scoreboard and, when you wish to return to the menu from this scoreboard, press the trigger.

RICHIE BENAUD'S SUMMARY: During the game, should you hunger for more statistics than are displayed on the scoreboards, call up Richie Benaud's summary. There are three main comparative statistics that Richie will dwell upon, namely:-

1.Fall of wicket (ie, each team's total accumulated runs at the time of each successive batsman's departure from the crease).

2.Run Rate (ie, each team's total accumulated runs at the end of each tenth over).

3.Partnerships (ie, the total runs made by a particular pair of batsmen during their combined stay at the crease).

SAVE GAME TO DISK

Pressing the ESC key will result in the current state-of-play to be saved to disk. At some future time you may recommence play by choosing the Load Old Game option referred to earlier.

SELECT BOWLER NEXT OVER

To get the game going, however, your most obvious choice at this point will be to select the bowler for the first over. Choose this option and you will exit the menu to the bowler selection menu.

BOWLER SELECTION

The bowler selection screen not only allows you to choose your bowler but also provides you with relevant bowler statistics. These are updated every over and include the number of overs bowled, maiden overs, runs-off and wickets taken. The numbers may assist you in determining which of your star bowlers are 'in form' today.

After every over, when you return to the bowler selection screen, the cursor will be adjacent the bowler who bowled the last over. You will not be permitted to employ this bowler for the next over, nor will you be allowed to use any other bowler who has already bowled 10 overs. A hooter will expose any such attempts at unsporting behaviour.

THE MAIN GAME

Having selected your bowler, press the trigger to begin the over. At the trigger press, you will move to the main game screen to watch the toll that your chosen bowler takes of the opposition (or, alternatively, the manner in which the opposition demolished your bowler). The result of each ball will be displayed on the screen as well as the current batsmen, the bowler, the batsman on strike, the over being played, the current run rate and, when the second team is batting, the run rate required for victory. The current total runs for the batsman on strike will appear on the right side of the screen as each ball is bowled.

Should a batsman be dismissed during the over, a scrolling message will appear spelling out the details of the dismissal. This message will continue to scroll until the trigger is pressed, at which time play will resume.

Fours and half-centuries will be noted and sixes and centuries will be given somewhat more demonstrative recognition.

At the end of each over you have two options: press the trigger to select the bowler for the next over; or, pull the joystick back to return the return to the menu for a check of the scoreboards or, perhaps, a quick Richie Benaud summary. (If you go to the menu, you can, of course, get back to the bowler selection screen from there as well.)

Should an innings terminate (first team batting) or should the game be won (second team batting) during the over, a scrolling message indicating the nature of the outcome will appear at the bottom of the screen. This message will continue to scroll until the trigger is pressed, at which time you will be returned to the menu. If the event is the end of the first batting team's innings, the same menu options will apply as previously described, except, of course, that the former fielding team will noe be batting. If, however, the event is the end of the game, the third menu option will be changed from 'Select Bowler Next Over' to 'End of Game Options'.

END OF GAME OPTIONS

At this point you can, of course, take a quick run around the scoreboards and Richie's end-of-game summary. You may even choose to save the completed game to disk for later printout. However, if you choose End of Game options option, all current options will be eliminated and replaced with two new options: New Game and Print Summary. Choosing New game option is self explanatory: the program will be reloaded from disk and you will be back where we started.

PRINT SUMMARY

If you choose the Print Summary option (which you should only do if you have an Epson printer all wired up and ready to go) there will be a short delay while the print module is entered from disk.

Eventually, a prompt will appear at the bottom of the screen inviting you to type in the venue of the game (eg, SYDNEY CRICKET GROUND) and press the RETURN key. You will then be asked to input the date (eg, 21 JAN 85). Type it in and press RETURN. A reminder then will appear asking you to make sure that the printer is 'ON-LINE'. Do so, press RETURN, and printout will begin.

MODIFYING PLAYER RATINGS

There are those, of course, who will not agree with the author's player ratings. Others may go as far as to insist on changing these ratings and, indeed, the whole touring party line-up. A utility program is included with Computer Cricket to facilitate modification of the names of touring party personnel and of the related batting and bowling ratings. This program is called 'RATINGS.BAS'.

Load and run RATINGS.BAS and you will be presented with a three-option menu. The choices are Print Ratings to screen, Print ratings to printer and Create new ratings. If you choose the first option, each touring party will be listed to the screen with a summary of player and overall team ratings. (As indicated, press the space bar to step through each team and back to the menu). If you have an EPSON printer and choose the second option, the EPSON will present you with a page similar to the 'Current Batting and Bowling Ratings' sheet.

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CREATING NEW RATINGS

If you choose to create new ratings, you will be asked to indicate which team. When you have answered that question, that touring party, complete with the current player and overall team ratings, will appear on the left of the screen. The right side of the screen is used to input the changes you require, whether they be names, batting ratings or bowling ratings. Follow the prompts to input the changed data for all 16 members of the touring party.

Note that, when you begin this process, the overall team ratings at the bottom of the screen disappear. As you enter each player's data, the totals for the various ratings (one-star, two-star or three-star) are incremented to assist you in balancing the team's capabilities against the other five teams. The author considers that, for both batsmen and bowlers, a line up which gives four three-star, four two-star and eight one-star players is a reasonable proposition. However, you are at liberty to set up your touring parties as you see fit. If, just once you would like to see the 'Windies' defeated, then here is your chance to cheat!!

When you have entered the revised data for the last player, new data lines for the main program will be automatically written and saved to disk. (This is the data which will be used when you next play Computer Cricket). At the end of the save-to-disk you will be given the choice of returning to the menu or terminating the program.

For the Walter Mittys among us, the RATINGS.BAS utility is a good way to insert our own names into these team of giants. The author's son, for example, has been known to replace a lesser light in the Australian team in order to assist his idols (Border, Rackemann and Lawson) in the bowling onslaught against the opposition.

FOR THE MORE ADVENTUROUS

Memory constraints limit the options to six teams. Those wishing to replace one nation with another (eg, SRI LANKA) should use RATINGS.BAS to insert the touring party data and manually change the nation name and colours at the following lines of CRICKET2.BAS:

Lines 3210-3220 : Change nation name against the relevant team number (maximum 11 characters).

Lines 3280-3330 : One of these lines will contain your team. Change the name and put your new team colours against variables C11, C12 and C13.

Lines 3350-3400 : As for lines 3280-3330 except that the variables for your team colours are C21, C22 and C23.

Using the team selection screen at the beginning of a new game as an example, The colour variables mentioned above control the following:-

C11 and C21 - Central Background

C12 and C22 - Nation Name

C13 and C23 - Screen Border

The author's daughter, incidently, has replaced one team on her disk with the HOLDER HIGH all-stars - complete with school colours. This all-female team has under contract a star bowler by the name of Bessie. Bessie is the family dog. The author accepts that, despite this arrogant creature's distinguished pedigree, the cricketing purist might reasonably be expected to object, and with some vigour, to the sight of IMRAN KAHN being dismissed for a duck by a Golden Retriever.

COMPUTER CRICKET PROGRAM NOTES

SCALAR VARIABLES

B	General utility
BAT	Batsman on strike (Value in BAT1 if BAT1 on strike or value in BAT2 if BAT2 on strike)
BAT1	Current batsman No.1 (holds a number equivalent to this batsman's place in the batting order)
BAT2	Current batsman No.2 (holds a number equivalent to this batsman's place in the batting order)
BOWL	Current bowler (holds a number equivalent to bowler's place in the batting order)
CB	Cursor bottom limit on screen (used in joystick handler routine)
CH	Cursor horizontal position (used in joystick handler routine)
CI	Cursor increment value (used in joystick handler routine)
CT	Cursor top limit on screen (used in joystick handler routine)
C11	Team 1 Colour No.1
C12	Team 1 Colour No.2
C13	Team 1 Colour No.3
C21	Team 2 Colour No.1
C22	Team 2 Colour No.2
C23	Team 3 Colour No.3

CHECK	Toggled variable used by the joystick handler routine
CURSOR	Vertical position of cursor on screen. Relates this position to player identity, etc., during joystick selection routine.
D	General Utility
DLP	Start address of modified display list for scoreboards (data in this particular display list must be refreshed after scoreboard display)
ESCLINE	Program line to GOTO if ESCape key is pressed
INNINGS	Set to 1 when first team is batting and 2 when second team is batting
L	General utility (mainly FOR/NEXT loops)
LL	General utility (mainly nested FOR/NEXT loops)
OUT	Number of batsmen out so far
OVERBALL	Number of balls bowled this over so far
OVERUNS	Number of runs scored this over so far (If zero then end of over, bowlers maiden overs incremented)
P	General Utility
PARTRUNS	Current Partnership runs. Transferred to TEMPERF array when batsman is dismissed or when innings or game over
PLAYDAT1	Program line where first selected nation's touring party data is located
PLAYDAT2	Program line where second selected nation's touring party data is located
PMBASE	Player/Missile bit-map base address set to four pages below top of RAM (see RAMTOP)
RAMTOP	Top of RAM. (Bumped back four pages in this program to accommodate and protect the Player/Missile bit-map
SWAP	Toggled to swap the batsman on strike, ie, to swap the values in BAT1 and BAT2

STRING VARIABLES

BAR$	A string of horizontal line ATASCII graphics characters for general utility use
BLINE$	A string of blanks for general uitlity use
NATION1$	Identity of first nation selected to play
NATION2$	Identity of second nation selected to play
NATION$	Temporary way-station for NATION2$ when all team related variables are swapped at innings and game end and, sometimes, after the toss
PART$	Holds all names in touring party of selected team during team selection. At end-of-innings and end-of-game, holds the scrolling end-of-innings and end-of-game messages
PLAYER$	Holds player's name temporarily before transfer to PART$ during team selection
R$	Holds EOL character. Used to separate data items during save-game routine
TEAM1$	Holds all data for one team
TEAM2$	Holds all data for the other team
TEMP$	Temporary way-station for TEAM2$ when all team-related variables are swapped at innings and game end and, sometimes, after the toss. Also used for various other utilitarian purposes.

SUBSCRIPTED VARIABLES

TEMPERF	Array used to temporarily hold player rating data before transfer to TEAM1$ and TEAM2$ during team selection. After team selection, used to hold batting partnership data.

THE TWO MAJOR STRING VARIABLES

Two 740 character string variables hold all the data relevant to a particular team. These variables are TEAM1$ and TEAM2$. Both of these strings have the same internal sub-string organisation. The broad internal arrangement is as follows:-

1-660	Data on individual players held in eleven 60-character substrings
661-663	Extras
664-665	Overs received
666-667	Wickets lost
668-670	Runs total
671-674	Run Rate
675-678	Run rate required
679	Flag set if team won the toss
680-720	Fall of wicket data
721-740	Run rate data (total runs accumulated every tenth over)

The internal arrangement of each individual player's sub-string is as follows:-

    1-10   **Name**
    11-13   'C' is placed here if caught out
    14-23   Catcher's name placed here if caught out
    11-23   'Stumped', 'LBW', or 'RUN OUT' placed here if these where the cause of dismissal
    24-26   'B' place here if bowled, caught or LBW
    27-36   Bowler's name placed here if bowled, caught or LBW
    38-40   Player's current total runs

The above data on each player is the data printed to the scoreboard

    41-42   No. of fours scored
    43-44   No. of sixes scored

The two items above feature in the summary printout only

    45-47   Balls received

The above item is used to calculate the player's batting strike rate for the summary printout

    48-49   Overs bowled
    50-51   Maidens
    52-54   Runs-off
    55-56   Wickets taken

The above items appear on the bowler-select screen and in the summary printout. The last two are also used to calculate the player's bowling average for the summary printout

    57   Player'S batting rating
    58   Player's bowling rating
    59   Flag set when this player has batted
    60   Flag set when this player has reach the half and full century

PROGRAMS

Computer Cricket comprises several programs as follows:-

<u>CRICKET1.BAS</u> : Pokes a machine language display list interupt routine and modified display lists for the various screens to free RAM before loading CRICKET2.BAS, ENTERing PLAYERS.LST and running the lot.

<u>CRICKET2.BAS</u> : is the main program.

<u>PLAYERS.LST</u> : contains the player names and rating data for all toruing parties. This is kept separate from CRICKET2.BAS to facilitate user amendment of touring party data using the RATINGS.BAS utility program.

<u>CRICKET3.LST</u> : will be entered immediately after the team selection. This file contains the toss routine. It will not be entered if you choose the 'Load Old Game' option.

<u>CRICKET4.LST</u> : will be entered immediately after the toss routine (or immediately after selection of the 'Load Old Game' option if it is selected). This file contains the text data and associated subroutines accessed by the main game routine in the main program CRICKET2.BAS

<u>CRICKET5.LST</u> : will be entered when the 'Print Summary' option is chosen at game's end. This file contains the print module.

<u>SAVEGAME.DAT</u> : contains the saved-game data

<u>RATINGS.BAS</u> : is a utility program which facilitates the viewing of, and, where desired, the modification of the touring party data in PLAYERS.LST.

Player/Missile graphics are used to create the borders for the scoreboard, bowler-select and team-select screens.

Modified display lists and display list interupts (DLIs) are used for all screens. The modified display lists are used on the scoreboard, bowler-select, team-select screens and main game screens to both modify the vertical screen architecture and call the display list interupt routine. On other screens, the GRAPHICS 0 display list is modified to call the DLI routine only. The DLI routine is used to modify the value COLPF2 [Dec - 53272, Hex - $D018], the hardware colour register shadowed at COLOR2 (Dec-710,Hex-$2C6, or BASIC colour register 2]. The DLI routine contains a four-element colour table

The modified display list for the scoreboards undergoes substantial modification during the game and has to be refreshed after each scoreboard display. The reason for this is that the is that the basic modified display list is further modified immediately before scoreboard display, to highlight in white, current and 'not-out' batsmen.

Liberal use is made of the ATARI's 'forced-read' mode (sometimes referred to as the 'RETURN' key mode) during various LOADs and ENTERs, this is to ensure continuation of program execution after the LOAD or ENTER. The text over which the cursor runs during these operations is actually on the screen; however, it is rendered invisible by the appropriate manipulation of the playfield colour registers.

Seamless changes between the various screens are ensured through judicious use of Direct Memory Access (DMA) enable and disable, Non-maskable Interupt enable and disable and Player/Missile enable and disable. Direct pokes to the playfield colour registers are used, rather than the BASIC SETCOLOR, to speed up the process a trifle.

In general, some areas of the program, particularly in the area of screen displays, text justification, etc, are extravagantly wasteful of memory. However, the author considered that visually interesting screen displays would be needed to compensate for the fact that the simulation accurately captures one key element of the game: at times , it can be pretty damn boring!

BOOT TALK

by J.W.Latham (Bundaberg, Queensland)

Have you been puzzled by those programs on tape or disk which load and run when the computer is switched on (or in the case of tape where the START key is pressed as you switch on). Well, wonder no more for in this article I hope to reveal the mysteries of these BOOT type programs.

If you have such a tape you can analyse the important parts with this simple program.

```
10 OPEN #1,4,0,"C:"
20 FOR I=1 TO 6:GET #1,A:? A:NEXT I
30 CLOSE #1
```

For disk type this program:-

```
10 DIM ML$(5):ML$="h 5▨♦"
20 POKE 769,1:POKE 770,82:POKE 778,1:P
OKE 779,0
30 POKE 772,0:POKE 773,6:X=USR(ADR(ML$
))
40 FOR I=0 TO 6:? PEEK(1536+I):NEXT I
```

When you have typed in the programs above and run them with a BOOT load cassette or disk in the program recorder or disk drive, you will see on your screen a set of numbers. These numbers are the first bytes to be used by the computer's OS (Operating System) as they carry information on where the program is to load and where control should go for initialisation. Let's look at the first six bytes which carry this information.

Byte No.	FUNCTION	Sample Byte
1	Boot Flag (not used)	0
2	Number of records or sectors	83
3	Loading address (low order)	0
4	Loading address (high order)	40
5	Init. address (low order)	80
6	Init. address (high order)	40

Although these pointers are shifted to different locations for cassette and disk BOOT programs, the information contained is the same. The leading 0 is a BOOT flag and is not used. The second byte tells the computer the number of 128 byte records that the program uses on cassette or the number of sectors used on the disk. The third and fourth bytes contain the load address of the machine language program. The fifth and sixth bytes contain the address for initialisation.

Once the program has been loaded into the correct addresses, control is then transferred to the subroutine which begins at the 7th byte from the load address. This is because with boot files the BOOT record at the beginning of the program are also loaded at the starting address so the actual program data begins with the 7th byte from the starting address. Once this is complete -i.e., when the computer encounters an RTS instruction, control is then transferred to the initialisation address contained in bytes 5 and 6. Finally, control is then passed to the address contained in locations 10 and 11 (DOSVEC).

Using the sample bytes from the table, our example program would begin loading at the address $4000 and the program would contain 83 records or sectors. Control would then pass to address $4006 (the 7th byte). After this, the initialisation program would begin at $4080. Finally, the program would then run at the locations contained in addresses 10 and 11.

With many programs, the run addresses in locations 10 and 11 are not used. Some do not even use the initialisation address contained in the 5th and 6th bytes. They simply jump straight into the program from the 7th byte.

That's all for now. Keep a look out for a utility program that will enable you to store up to 8 BOOT files on any one disk. I'm working on one now.

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—STOP PRESS—

Dollar & Cent Print-Out Formatting

by Mike Shaw
Reprinted from Queensland A.C.E. Newsletter

Have you ever wished you could print dollar and cent values to the screen or printer with all the decimal points lined up? Without the PRINT USING function available with MICROSOFT BASIC or BASIC XL, this can be rather difficult! One way I have found to overcome this problem is to store numeric variables as strings. The sample program (hopefully) should demonstrate this idea.

```
20  DIM A$(9),B$(50):B$(50)="  ":B$(2)=B$
30  I=1:FOR J=1 TO 5
40  ? "ENTER VALUE #";J;
50  INPUT A:A=INT(A*100+0.5)/100
60  A$=STR$(A):B=LEN(A$):IF A=INT(A) THEN A$(B+1,B+3)=".00":B=LEN(A$)
70  IF A$(B-1,B-1)="." THEN A$(B+1,B+1)="0"
80  B$(I+9-LEN(A$),I+8)=A$
90  I=I+9:NEXT J
110 I=1:FOR J=1 TO 5:? B$(I,I+8):I=I+9:NEXT J
```

LINE 20 dimensions two strings, A$ to the length of A$ times the maximum number of possible entries.
LINES 30-50 ask for INPUT. The formula A=INT(A*100+0.5)/100 rouns off any number with more than two decimal places.
LINE 60 stores numeric input in A$ and checks to see if the number is a whole number. If so, then ".00" is added to the end of A$.
LINE 70 checks for one decimal place and adds "0" to A$.
LINE 80 stores A$ in the holding string (B$) -right justified and ready for printing.
LINE 110 prints out the five values that were entered. I hope someone finds this method helpful.

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